



# 2014 ALMOND DROUGHT SURVEY



## California Department of Food and Agriculture

### Cooperating with the USDA, National Agricultural Statistics Service

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The 2014 Almond Drought Survey, conducted by USDA's National Agricultural Statistics Service (NASS) in cooperation with the California Department of Food and Agriculture (CDFA), gauges the drought impact on almond growers' decisions for their almond operations.

The source of the almond drought data was a questionnaire mailed to a stratified sample of almond growers included in the NASS database. The sample was stratified by acreage and summarized as small, medium and large operations. Operations with more than 600 acres of almonds were considered large. Questionnaires were mailed to 688 almond growers in early July. Non-respondents were telephoned. Responses were received from 458 growers.

This report summarizes the survey results at the State and large farm level. Items may not add to 100 percent if any of the questions were not answered. Respondents were asked to report for acres they operated or managed, excluding abandoned acres.

## SURFACE WATER SUPPLY

### Does this almond operation utilize surface water for crop irrigation?

	Yes	No
Large Farms (600 or more Almond acres)	75.0%	25.0%
<b>State Total</b>	<b>61.8%</b>	<b>37.6%</b>

### Across all of this operation's almond orchards, approximately how much surface water do you receive and apply on average in **non-drought years**?

	Acre Inches/Acre
Large Farms (600 or more Almond acres)	32.0
<b>State Total</b>	<b>30.9</b>

### Across all of this operation's almond orchards, do you expect to be supplied less surface water between February 2014 and October 2014 than the amount supplied during the same time period in 2013?

	Yes	No
Large Farms (600 or more Almond acres)	86.0%	12.3%
<b>State Total</b>	<b>79.0%</b>	<b>18.3%</b>

### How many inches per acre less are expected to be supplied between February 2014 and October 2014 compared to the same time period in 2013?

	Acre Inches/Acre
Large Farms (600 or more Almond acres)	22.3
<b>State Total</b>	<b>16.9</b>

**SURFACE WATER SUPPLY** *continued*

For this operation's total surface water supply in 2014, what percent is supplied by			
	State (SWP)	Federal (CVP)	Private or Local Irrigation District (non SWP & CVP water)
Large Farms (600 or more Almond acres)	17.4%	43.9%	38.7%
<b>State Total</b>	<b>9.1%</b>	<b>23.2%</b>	<b>67.7%</b>

**GROUNDWATER SUPPLY**

Does this almond operation use groundwater for crop irrigation?		
	Yes	No
Large Farms (600 or more Almond acres)	86.8%	13.2%
<b>State Total</b>	<b>69.7%</b>	<b>29.0%</b>

Across all of this operation's almond orchards, approximately how much groundwater do you pump and apply on average in <b>non-drought years</b> ?	
	Acre Inches/Acre
Large Farms (600 or more Almond acres)	25.8
<b>State Total</b>	<b>25.3</b>

Do you believe the production from this operation's wells will supply 100% of the water needed for this operation's almond acreage between February 2014 and October 2014?		
	Yes	No
Large Farms (600 or more Almond acres)	56.1%	43.9%
<b>State Total</b>	<b>67.4%</b>	<b>27.9%</b>

In 2014, what percent of the water used to irrigate this operation's almonds will come from wells?	
	Percentage from Wells
Large Farms (600 or more Almond acres)	82.4%
<b>State Total</b>	<b>79.8%</b>

Will this operation pump more groundwater between February 2014 and October 2014 than it did during same period in 2013?		
	Yes	No
Large Farms (600 or more Almond acres)	63.6%	33.3%
<b>State Total</b>	<b>52.0%</b>	<b>45.5%</b>

How much more water will this operation pump between February 2014 and October 2014 than it did during the same period in 2013?	
	Acre Inches/Acre
Large Farms (600 or more Almond acres)	18.9
<b>State Total</b>	<b>14.7</b>

**GROUNDWATER SUPPLY *continued***

Has this operation had to do any of the following in the past year, or scheduled to complete the following in the coming months, to access more groundwater for its almond acreage due to the current drought?

	<b>Drill a new irrigation well.</b>		<b>Recondition an existing well (e.g., deepen or lower bowls)</b>	
	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>No</b>
Large Farms (600 or more Almond acres)	53.0%	43.9%	63.6%	34.8%
<b>State Total</b>	<b>22.5%</b>	<b>74.5%</b>	<b>32.5%</b>	<b>66.5%</b>

Across all of this operation's almond orchards, what is the current average depth to water for all of its irrigation wells?

	<b>Feet</b>
Large Farms (600 or more Almond acres)	261
<b>State Total</b>	<b>172</b>

**GROUNDWATER QUALITY**

Across this operation's almond orchards, is the salinity of the groundwater in excess of the amount recommended for irrigation of almonds?

	<b>Yes</b>	<b>No</b>
Large Farms (600 or more Almond acres)	39.4%	59.1%
<b>State Total</b>	<b>18.1%</b>	<b>78.6%</b>

What percent of this operation's current groundwater supply is higher in salinity than the recommended amount for irrigation of almonds?

	<b>Higher in Salinity than Recommended</b>
Large Farms (600 or more Almond acres)	52.5%
<b>State Total</b>	<b>73.8%</b>

Did this operation experience, or does it expect to experience, a negative impact on tree health or harvest quantity/quality in 2014 due to the application of high saline groundwater?

	<b>Yes</b>	<b>No</b>
Large Farms (600 or more Almond acres)	61.5%	38.5%
<b>State Total</b>	<b>77.9%</b>	<b>22.1%</b>

## TREE REMOVAL

Excluding normal removals due to tree age (old trees with declining production), has this operation removed trees within the last 6 months, or does it intend to remove trees in the next 6 months, due solely to the lack of sufficient water availability, or water quality, such as high saline content?		
	Yes	No
Large Farms (600 or more Almond acres)	15.8%	82.9%
<b>State Total</b>	<b>9.3%</b>	<b>89.2%</b>

  

What percent of acres, as a percent of this operations total almond acreage, has this operation removed, or planned to remove, before August 2014 as a result of the current drought, lack of water supply, or water quality?	
	Percent of Acres
Large Farms (600 or more Almond acres)	17.4%
<b>State Total</b>	<b>37.8%</b>

## FUTURE NEW PLANTINGS

Due to the current drought, has this operation decided to delay replanting of acreage that was removed due to the drought (lack of water supply or quality)?		
	Yes	No
Large Farms (600 or more Almond acres)	22.4%	75.0%
<b>State Total</b>	<b>10.3%</b>	<b>86.6%</b>

  

Due to the current drought, has this operation decided to delay expanding or planting of new almond ground, either virgin ground or ground normally used for annual crops grown by this operation?		
	Yes	No
Large Farms (600 or more Almond acres)	38.2%	60.5%
<b>State Total</b>	<b>20.8%</b>	<b>77.0%</b>

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